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ABSTRACT

A series of projects were conducted in Maryland as part of an effort to develop a valid and reliable student database for planning, decision making, and Vocational Education Data System reporting; and a systematic and objective procedure to evaluate the quality of occupational programs in Maryland's community colleges. The projects had three objectives: (1) to conduct statewide studies related to credit enrollment, degree recipients, graduate follow-up, leaver (entrant) follow-up, employer follow-up, discipline cost analysis, the continuing education data system, and program inventory; (2) to run the State Board's Program Data Monitoring System and review each of the career programs by June 15, 1985; and (3) to publish an in-depth evaluation of 50 community college programs and a statewide evaluation of two-year engineering programs by March 15, 1985. The project report provides a brief overview of procedures and results for each of the objectives. In addition, data are presented on the number and percentage of programs evaluated and discontinued between 1978 and 1984 by program area; programs designated for qualitative evaluation in 1985 are listed; and guides for using the Program Data Monitoring System and for using information to support instructional program evaluation are appended. (EJV)

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THE IMPROVEMENT OF OCCUPATIONAL EDUCATION IN MARYLAND

A Progress Report
Fiscal Year 1985

IC 860 070

Maryland State Board for Community Colleges
sbcc
The Jeffrey Building • Annapolis, Md. 21401

THE IMPROVEMENT
OF OCCUPATIONAL EDUCATION
IN MARYLAND

A Progress Report

Fiscal Year 1985

DIRECTED BY:	Maryland State Board for Community Colleges
FUNDING GRANTED BY:	Division of Vocational-Technical Education Maryland State Department of Education
PROJECT DIRECTOR:	Lawrence A. Nespoli

February 1986
Annapolis, Maryland 21401

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Resolution

ESTABLISHMENT OF JOINT COORDINATING COMMITTEE FOR OCCUPATIONAL EDUCATION PROGRAMS MARYLAND STATE BOARD OF EDUCATION - MARYLAND STATE BOARD FOR COMMUNITY COLLEGES

WHEREAS, The Maryland State Board for Community Colleges and the Maryland State Board of Education, in order to improve, expand, and coordinate their individual and joint efforts in the development, achievement, and support of high-quality occupational programs and services in post-secondary education for the citizens of Maryland; and

WHEREAS, A joint commitment of these two agencies to regular and systematic cooperation and coordination will assure the achievement of certain key objectives;

NOW, THEREFORE, BE IT RESOLVED That the State Board for Community Colleges and the Maryland State Board of Education will link efforts to achieve the following objectives:

1. Coordinate staff efforts through active dialogue and information-sharing concerning curriculum, facilities, personnel development, fiscal matters, and appropriate technical assistance in the occupational area;

2. Coordinate appropriate interrelated informational components within information systems;

3. Systematic sharing of relevant communication pertaining to specific occupational projects undertaken by community colleges;

4. Jointly develop, publish, and disseminate informational program materials and brochures highlighting occupational programs in Maryland community colleges;

5. Establish a joint coordinating committee for occupational education to foster interagency planning on annual and long-range master planning.

Approved:
State Board of Education, April 28, 1976
State Board for Community Colleges, May 13, 1976

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PROJECT SUMMARY
FISCAL YEAR 1985

PROJECT TITLE

Management Information System and Program Evaluation, Activity No. 4.2.6

PROBLEM

A valid and reliable student data base is needed for planning, decision making, and Vocational Education Data System (VEDS) reporting. A systematic and objective procedure is needed to evaluate the quality of occupational programs in Maryland community colleges.

OBJECTIVE NO. 1

To conduct the following statewide projects, including the preparation of computer files and publication of a report for each study:

Credit enrollment
Degree recipients
Graduate follow-up
Leaver (entrant) follow-up
Employer follow-up
Discipline cost analysis
Continuing education data system
Program Inventory

PROCEDURES AND RESULTS

Credit Enrollment. Opening Fall enrollment is reported using a system of computer tapes from the colleges. In addition to demographic data about each student, the student's program of study and credit hours carried are reported. All seventeen community colleges submitted tapes or coding forms in Fall 1984. Data were published in the State Board for Community Colleges (SBCC) State Plan for Community Colleges and in the Databook.

Certificates and Degrees Awarded. The number of students who complete programs during the fiscal year are reported by college by program. Trends in the mix of occupational and transfer degrees are analyzed. Colleges submit the degree data on computer tapes or coding forms with one record per graduate. A report on characteristics of community college graduates was presented in the SBCC Bulletin. Degree trends were analyzed in Databook.

Graduate Follow-Up. The statewide graduate follow-up study surveys persons about nine months after program completion. The study is a joint project of the community colleges and the State Board for Community Colleges and uses a standard questionnaire mailed in odd-numbered years. In FY 1985, 8,219 graduates from 1984 were surveyed and an adjusted response rate of 50 percent was achieved. Each college has received a printout of its data, a statewide aggregation, and an aggregation of the

responses of graduates from similar peer colleges. Crosstabulation by program was provided to each college. A report of the 1984 graduates will be sent to the Division of Vocational-Technical Education as soon as it is completed.

Leaver Follow-Up. The statewide entrant follow-up study surveys persons two to four years after entry to the community college. The study uses a standard questionnaire mailed out in even-numbered years. All first-time entrants from 1982 were surveyed in FY 1984, and an adjusted response rate of 37 percent was achieved. The results have been tabulated by the State Board for the seventeen community colleges, and a final report will be shared with DVTE as soon as it is completed.

Employer Follow-Up. The statewide employer follow-up study surveys the employers of graduates who (1) completed an occupational program, (2) are employed full-time, (3) are in work related to their education, and (4) gave permission to contact their employer. The study is a joint project of the community colleges and the State Board for Community Colleges and uses a standard questionnaire mailed out in odd-numbered years. Specific questions required by the VEDS are included in the survey. In FY 1985, employers of the 1984 community college graduates were surveyed and a response rate of 60 percent was achieved. Each college received printouts of its data, statewide results, and comparisons with previous employer surveys. A report utilizing the data from this employer survey and comparing the data with previous surveys is being prepared and will be sent to the Division of Vocational-Technical Education when it is completed.

Discipline Cost Analysis. Costs and full-time equivalent students are reported for each discipline at each college. The data enable an analysis of trends in costs per FTE student in occupational disciplines. Colleges are provided with trend reports for their college, similar size colleges, and statewide. A Discipline Cost Analysis Manual has been developed and is revised periodically to clarify the procedures for preparing the cost data. Colleges report the data to SBCC on a standard format tape in order to facilitate processing and accuracy of the data.

Continuing Education Data System. Enrollments and contact hours are reported to the State Board for Community Colleges for each approved noncredit course. Reports are generated showing the number of registrants and full-time equivalent students in specific types of occupational courses at each college. Copies of these reports are sent to the colleges and to the DVTE at the end of each year. Summary reports of enrollments in noncredit courses are included in the annual State Board Databook.

The State Board for Community Colleges has implemented a computerized system for colleges to submit enrollment, course, and student demographic data in continuing education. This tape system provides software that generates a standard format file and produces management and aid transmittal reports at each college. The software was used by all colleges in FY 1985 to produce State reports and to produce an end-of-year data tape for the SBCC.

Program Inventory. The SBCC Program Inventory was updated in FY 1985 to reflect programs that were added, discontinued, or made inactive. The Program Inventory is the backbone of the SBCC Information System and is critical to the Program Data Monitoring System and to student follow-up studies. A crosswalk is used

for the new federal Classification of Instructional Programs (CIP). Colleges will continue to report their enrollment, degrees, discipline cost analysis, employee data, and follow-up surveys using the present six-digit State Board for Community Colleges and State Board for Higher Education subject codes. The SBCC and SBHE translate these program codes to CIP codes for any federal report which requires CIP codes.

Common Data Elements. In a statewide system of locally governed community colleges, each institution is free to develop its own data processing system. In order to insure that data from each institution are comparable and to promote more efficient development of data systems, the Association of Data Processing Directors of Maryland Community Colleges has produced the Course Master Data Elements and Student Data Element Dictionary. This Data Element Dictionary has been continuously updated by the data processing directors and maintained by the State Board for Community Colleges on the SBCC computer file. In FY 1985, a section on course master file data elements was added to the dictionary.

OBJECTIVES NO. 2 AND NO. 3

To run the State Board for Community Colleges Program Data Monitoring System and review each of the career programs by June 15, 1985. (See Appendix A for a description of the SBCC PDM System.)

To publish an in-depth evaluation of fifty community college programs by March 15, 1985 and a statewide evaluation of two-year engineering programs. (See Appendix B for a description of the SBCC Program Evaluation System.)

PROCEDURES AND RESULTS

Program Data Monitoring System. The 1985 printout of the Program Data Monitoring System was sent to college occupational deans and institutional researchers for confirmation of the data. Upon receipt of the corrections, a final printout was made and a copy was sent to the DVTE with one page per program at each college.

Enhancements are made to the PDM System every year. This year data were added about Fall 1984 enrollment, FY 1984 awards, and FY 1984 discipline costs. The 1984 Higher Education Cost Index was included in the Discipline Cost Analysis display of cost trends and the results for the 1982 graduates were added to the display of follow-up surveys.

Program Evaluation. The system for program evaluation is described at length in the Instructional Program Manual. Briefly, the SBCC reviews each program at each college every April using the Program Data Monitoring System. The PDM System displays trends in enrollments, awards, employment in field of training, student satisfaction, discipline costs, and job openings. Programs that appear to need a qualitative evaluation are identified and a letter asking specific questions is sent to the college presidents. The colleges prepare written responses, and the responses are compiled into a Program Evaluation Report reviewed by the State Board for Community Colleges in January.

The 171-page Program Evaluation Report was published in April 1985 and sent to the DVTE. After the seventh full cycle of program evaluations, 328 programs have

been evaluated. Many programs have been improved through changes in curriculum, staffing, or recruitment. In addition, 75 programs have been discontinued and thirteen are currently inactive. Table I shows the number of programs evuluated by year and by occupational program area.

In June 1985, 53 programs were identified for a qualitative evaluation in the eighth cycle of the Program Evaluation System to be conducted in FY 1986. Table 2 gives the names of the programs identified for a college evaluation and the primary reason(s) for the evaluation request.

Table I

PROGRAM EVALUATION SYSTEM
MARYLAND COMMUNITY COLLEGES
FISCAL YEARS 1978 - 1984

	Number of Active Programs		Programs Designated for Evaluation														Total 1978 - 1984		Programs Discontinued 1978-1984	
			1978		1979		1980		1981		1982		1983		1984					
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
TRANSFER	84	21	-	-	1	2	16	33	3	6	14	29	8	17	11	22	53	16	-	-
OCCUPATIONAL																				
Business & Commerce	101	26	10	27	10	22	12	25	15	29	12	25	10	21	13	26	82	25	14	19
Data Processing	23	6	2	5	5	11	1	2	1	2	-	-	-	-	1	2	10	3	1	1
Health Services	66	17	8	22	6	13	1	2	11	21	7	15	6	13	6	12	45	14	12	16
Mechanical & Engineering	60	15	11	30	14	31	8	17	9	17	9	19	7	15	13	26	71	22	21	28
Natural Science	14	4	2	5	4	9	3	6	3	6	2	4	2	4	-	-	16	5	9	12
Public Service	48	12	4	11	5	11	7	15	10	19	4	8	15	31	6	12	51	15	18	24
TOTAL	396	100	37	100	45	100	48	100	52	100	48	100	48	100	50	100	328	100	75	100

11-08-85

Table 2

PROGRAMS DESIGNATED FOR QUALITATIVE EVALUATION
MARYLAND COMMUNITY COLLEGES
1985

COLLEGE Program	Issue	HEGIS No.
ALLEGANY		
Business Administration Transfer	Low transfer performance	4970-01
Data Processing Technology	Declining enrollment Statewide evaluation	5101-01
Forest Technology	Declining enrollment Low placement High cost Previous evaluations in 1978 & 1981	5403-01
ANNE ARUNDEL		
Office Technology		5005-01
Communication Arts Technology	Low placement High cost Previous evaluations in 1979 & 1982	5008-01
Data Processing	Declining enrollment Statewide evaluation	5101-01
BALTIMORE		
General Studies	Declining enrollment Low transfer performance Previous evaluation in 1979	4950-01
Fashion Design	Declining enrollment Low awards Low placement	5012-12
Business Data Processing	Declining enrollment Low awards Previous evaluation in 1981	5103-01
Dental Assisting	Declining enrollment Low awards Inadequate follow-up High cost Previous evaluation in 1979	5202-01
Electronics Technology	Declining enrollment Low placement	5310-01
Public Sector Administration	Low enrollment Low awards	5508-01

CATONSVILLE		
Computer Studies/Data Processing	Declining enrollment Statewide evaluation	5103-01
Mental Health Services	Declining enrollment Inadequate follow-up High cost Previous evaluations in 1978 & 1981	5216-01
Civil Engineering Technology	Low awards	5309-01
Recreation, Parks, & Leisure Studies	Declining enrollment Inadequate follow-up Previous evaluation in 1981	5506-01
CECIL		
Arts & Sciences Transfer	Low awards Inadequate follow-up Previous evaluation in 1981	4910-01
Data Processing	Declining enrollment Statewide evaluation	5101-01
CHARLES		
Office Technology	Declining enrollment Declining awards Low placement	5005-01
Data Processing	Declining enrollment High cost Statewide evaluation	5103-01
Licensed Practical Nursing	Declining enrollment Declining awards Inadequate follow-up Previous evaluation in 1982	5209-01
CHESAPEAKE		
Business Administration Transfer	Declining enrollment Inadequate follow-up	4970-01
Computer Studies	Declining enrollment Statewide evaluation	5103-01
DUNDALK		
Computer Programming Technology	Declining enrollment Statewide evaluation	5103-01
Retail Floristry	Declining enrollment	5402-02
Labor Studies	Declining enrollment Inadequate follow-up High cost Previous evaluation in 1981	5599-04

ESSEX		
Data Processing	Declining enrollment Statewide evaluation	5103-01
Computer Technology	Declining enrollment Inadequate follow-up	5105-01
Medical Laboratory Technology	Declining enrollment	5205-01
Mental Health	Declining enrollment Declining awards Low placement High cost Previous evaluations in 1978 & 1982	5216-01
FREDERICK		
Data Processing	Declining enrollment Statewide evaluation	5101-01
Dental Assisting	Declining enrollment Inadequate follow-up High cost Previous evaluation in 1982	5202-01
Park Management	Inadequate follow-up Previous evaluation in 1981	5506-02
GARRETT		
Arts & Sciences Transfer	Declining enrollment Declining awards	4910-01
Coal Mining Technology	Low enrollment Low awards Inadequate follow-up Previous evaluation in 1982	5399-03
HAGERSTOWN		
Data Processing	Declining enrollment Low placement Statewide evaluation	5101-01
Hospitality	Declining enrollment Inadequate follow-up	5404-01
HARFORD		
Business Management	Declining enrollment Inadequate follow-up	5001-01
Data Processing	Declining enrollment Statewide evaluation	5101-01
Nursing	Declining enrollment	5208-01

HOWARD		
Accounting	Declining enrollment Low placement	5002-01
Housing Management	Low enrollment Low awards Inadequate follow-up Previous evaluations in 1978 & 1981	5004-03
Residential Construction	Inadequate follow-up High cost	5317-03
MONTGOMERY		
Business Administration Transfer	Low awards Low transfer performance	4970-01
Computer Science & Technology	Declining enrollment Low placement Statewide evaluation	5103-01
Computer Operator	Declining enrollment Low placement	5104-01
Mental Health Associate	Declining enrollment Low placement Previous evaluation in 1981	5216-01
PRINCE GEORGE'S		
Office Technology	Declining enrollment	5005-01
Data Processing	Declining enrollment Statewide evaluation	5101-01
Radiologic Technology	Declining enrollment High cost	5207-01
WOR-WIC TECH		
General Studies	Low awards Inadequate follow-up Previous evaluation in 1980	4950-01
Data Processing	Statewide evaluation	5103-01
Automotive Technology	Low enrollment High cost Previous evaluation in 1982	5306-01

Appendix A

A GUIDE FOR USERS OF THE PROGRAM DATA MONITORING SYSTEM

The State Board for Community Colleges Program Evaluation System was developed in cooperation with the community college presidents and approved by the Board in 1978. The system involves two steps: quantitative evaluation of each program each year by the SBCC, and qualitative evaluation of selected programs each year by the community colleges. The following information is given to assist in the interpretation of data on the Program Data Monitoring (PDM) printout: a display of enrollment, awards, follow-up, discipline cost, and manpower information.

Program Number and College Program Title. These items are taken from the current SBCC Program Inventory. Data are only shown on the PDM printout as related to programs and not according to program options. Data related to program options are included as part of the overall program. For example, a college may have a program in Electronics Technology, with an option in Digital Electronics. Data related to the Digital Electronics option are included in the data with Electronics Technology.

Enrollment and Awards. Enrollment and awards data are obtained from Enrollment Information System (EIS) data tapes and from the Degree Data System tapes, respectively. The "FT ENR-TO-AWARD RATIO" is derived by taking one-half of the full-time enrollment in a given year and dividing that figure by the number of graduates two years later. For example, a program that had 100 full-time students in 1978 and twenty-five graduates in 1980 would have a ratio of 2:1. All student and discipline cost information on the PDM printout is submitted by the colleges, and changes are not made in that data without consulting the college.

Similar Programs. Enrollment and award data from the most recent year are shown for each college having the same program in order to show the scope of the programs at adjacent colleges and statewide.

Student Follow-Up Studies. Student follow-up studies are conducted jointly by the college and the State Board, with the college responsible for mailing the questionnaires to students. The column 1980 Graduates refers to a study of all graduates of FY 1980, surveyed in Spring 1981. The statewide response rate among graduates actually receiving the questionnaire was 65 percent. The column 1982 Graduates refers to a similar survey conducted in 1983, with a response rate of 61 percent. All percentages in the follow-up section are simple percentages of the number of respondents, except the data "Among Full-time Employees" where blanks have been excluded from the denominator to arrive at the percentage. Graduate follow-up data are generally not interpreted when there are less than ten respondents. However, since the questionnaires were identical in both follow-up studies, the results from the two studies can be combined, if necessary, to get a more reliable picture of the graduates.

Annual Openings, 1976-1982. The data were developed by the Maryland Department of Human Resources, Research and Analysis Division, and published as the Occupational--Industrial Outlook-1982, March 1980. A similar publication was used for the Baltimore area data, which includes Baltimore City and the following counties: Harford, Baltimore, Carroll, Howard, and Anne Arundel. The methodology for projecting job openings

involves using data from the Occupational Employment Statistics (OES) Program. Occupational information is based upon employer responses solicited every three years. The projections include openings due to growth and labor force separations.

Discipline Credit Hour Cost. Data are shown as reported in the SBCC Discipline Cost Analysis for the fiscal years shown. Basically, the discipline cost analysis accounts for all expenditures at the colleges (including federal) and attributes them to direct costs, additional direct costs, and indirect costs. Direct costs are a function of the faculty compensation and class size. Additional direct costs include supplies and materials related to the teaching of that discipline, such as laboratory supplies. Indirect costs include general administration costs, including the library, student services, and utilities. Indirect costs are applied to all courses in proportion to the number of full-time equivalent students in the course. Cost data are shown for each discipline at a college and compared to the cost of that discipline statewide; costs are also shown for all disciplines at a college and compared to the cost of all disciplines statewide.

Procedure for Program Evaluation. Every April, the updated PDM printout is distributed to academic deans, occupational deans, and institutional research directors to verify the data. The SBCC staff then identifies several programs at each college that appear to be in some difficulty and in need of a qualitative evaluation. In general, selection is based upon enrollment, awards, and job placement, in that order. Discipline cost information is used in the context of the overall discipline cost at the college and the average cost of the discipline at other colleges.

The selection of programs for a qualitative evaluation is assisted by "flags" shown in the lower right corner of the PDM printout. The flags represent criteria checks on certain data, such as "Enrollment decreased at least 20 percent and by ten students last year." The flags were set with the help of community college academic deans, occupational deans, and institutional research directors. The flags are used by the SBCC staff to assist in selecting programs for a qualitative evaluation but are not the sole criteria for requesting a qualitative evaluation by the college.

The SBCC staff constructs questions to be addressed in the qualitative evaluation. Upon approval by the State Board for Community Colleges in June, the questions are sent to each college president. Colleges conduct the qualitative evaluations, respond to the questions raised, and submit a report to the SBCC. The SBCC publishes a report of all questions and responses. The report is distributed to the community colleges, to the State Board for Higher Education, to the State Department of Education, Division of Vocational-Technical Education, and to the Maryland State Council for Vocational-Technical Education.

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COLLEGE: HARFORD COMMUNITY COLLEGE

COLLEGE PROGRAM TITLE	YEAR IMPLEMENTED	CURRENT STATUS	USOE NUMBER
CERTIFICATE: NOT OFFERED			
ASSOCIATE: NURSING	PRE 1974	ACTIVE	7030100

PROGRAM NUMBER: 5208 01
HEGIS PROGRAM CATEGORY: NURSING, RN

FALL ENROLLMENT:	1979	1980	1981	1982	1983	1984
CERTIFICATE LEVEL						
FULL-TIME	-	-	-	-	-	-
PART-TIME	-	-	-	-	-	-
ASSOCIATE LEVEL						
FULL-TIME	176	198	145	130	121	65
PART-TIME	244	330	330	397	395	342
TOTAL HEAD-COUNT	420	528	475	527	516	407
AWARDS:						
CERTIFICATES	-	-	-	-	-	-
ASSOCIATE DEGREES	72	72	98	88	71	86
TOTAL ALL AWARDS	72	72	98	88	71	86
PERCENT FULL-TIME	42%	38%	31%	25%	23%	16%
FT ENR-TO-AWARD RATIO			1:1	1:1	1:1	1:1
STATEWIDE FULL-TIME ENROLLMENT-TO-AWARD RATIO						1:1

(RATIO = 1/2 FT ENROLLMENT DIVIDED BY AWARDS 2 YEARS LATER)

STUDENT FOLLOW-UP STUDIES:

	1980 GRADUATES		1982 GRADUATES	
	COLLEGE	STATE	COLLEGE	STATE
NUMBER OF RESPONDENTS	28	388	38	415
RESPONSE RATE	39%		43%	
FULL-TIME JOB, DIRECTLY RELATED	50%	61%	79%	70%
FULL-TIME JOB, SOMEWHAT RELATED	7%	3%	0%	3%
FULL-TIME JOB, NOT RELATED	0%	1%	0%	1%
PART-TIME JOB	32%	27%	16%	21%
TRANSFERRED, NOT EMPLOYED	4%	1%	0%	0%
SEEKING WORK, NOT EMPLOYED	4%	2%	0%	0%
MILITARY, HOME RESPON, OTHER	4%	5%	5%	4%
TOTAL	100%	100%	100%	100%
TRANSFERRED, REGARDLESS OF EMPL	32%	12%	13%	10%
ACHIEVED PERSONAL GOAL	93%	96%	95%	98%
SATISFIED WITH INSTR IN PROGRAM	100%	94%	95%	95%
AMONG FULL-TIME EMPLOYEES				
MEDIAN ANNUAL SALARY	$14,029	$14,326	$16,600	$16,640
NO. REPORTING SALARY DATA	15	217	24	270
BEGAN NEW JOB AFTER COLLEGE	94%	85%	69%	85%
SATISFIED WITH EMPLMNT PREP	100%	93%	93%	95%

ANNUAL JOB OPENINGS, 1976-1982:

	BALT AREA	STATEWIDE
NURSES, PROFESSIONAL	975	1,438

JOB OPENINGS MAY ALSO BE AVAILABLE IN OTHER OCCUPATIONS. SEE DHR MANPOWER PROJECTIONS. SOME STUDENTS ARE ALREADY EMPLOYED WHILE ATTENDING THE COMMUNITY COLLEGE. THEREFORE, OPENINGS MAY NOT BE NEEDED FOR ALL GRADUATES. OPENINGS ARE FOR MARYLAND ONLY.

SIMILAR PROGRAMS IN MARYLAND COMMUNITY COLLEGES:

COLLEGE	ENROLLMENT FALL, 1984 FT	PT	TOTAL	AWARDS 83-84 CERT	AA	SCH YR TOTAL
ALLEGANY	203	159	362	-	70	70
ANNE ARUNDEL	63	473	536	-	74	74
BALTIMORE	101	172	273	-	64	64
CATONSVILLE	281	662	943	-	106	106
CECIL	51	99	150	-	22	22
CHARLES	60	24	84	-	33	33
ESSEX	155	492	647	-	106	106
FREDERICK	47	112	159	-	39	39
HAGERSTOWN	31	34	65	-	25	25
HARFORD	65	342	407	-	86	86
HOWARD	54	311	365	-	81	81
MONTGOMERY	46	157	203	-	80	80
PRINCE GEORGE'S	231	534	765	-	116	116
WOR-WIC TECH	19	29	48	-	34	34
TOTAL ALL COLLEGES	1407	3600	5007	-	936	936

DISCIPLINE CREDIT HOUR COST IN NURSING, RN

	FY81	FY82	FY83	FY84	81-84 CHG
HIGHER ED PRICE INDEX	203	226	240	253	+25%
STATEWIDE COST:					
ALL DISCIPLINES	$83	$87	$94	$101	+22%
THIS DISCIPLINE	$133	$145	$152	$160	+20%
COLLEGE COST:					
ALL DISCIPLINES	$84	$81	$106	$112	+33%
THIS DISCIPLINE	$87	$105	$146	$130	+49%

THESE COSTS ARE DISCIPLINE COSTS, NOT PROGRAM COSTS; A SINGLE DISCIPLINE MAY SUPPORT SEVERAL PROGRAMS.

PDM QUANTITATIVE CRITERIA CHECKS INDICATE:

ENROLLMENT DECREASED AT LEAST 10% AND BY 10 STUDENTS LAST YEAR

SOURCES: HEGIS REPORTS, FOLLOW-UP STUDIES, DEPT OF HUMAN RESOURCES "OCCUPATIONAL-INDUSTRIAL OUTLOOK" AND DISCIPLINE COST ANALYSIS. DATA ARE SUBJECT TO CONFIRMATION BY THE COLLEGE.

Appendix B

USING INFORMATION TO SUPPORT INSTRUCTIONAL PROGRAM EVALUATION

Program evaluation in Maryland community colleges is part of an integrated system for program implementation and evaluation, with both pieces woven together by an extensive data base. The process for implementing and evaluating instructional programs in Maryland community colleges is diagrammed on the following page. New programs begin with local needs. Faculty members and administrators see educational needs among students and employers and respond with program ideas. By December, the college submits the titles for its proposed programs to the State Board for Community Colleges (SBCC) and the titles are printed in the State Plan for Community Colleges in Maryland. In June, the college submits Letters of Intent that describe the goals and nature of the proposed programs. The SBCC acts on the Letters of Intent at its July meeting, raising questions as necessary and making suggestions for program development. Often the questions arise from the Program Data Monitoring System. For example, a college could propose a new program in recreation technology; statewide data about employment of graduates of existing recreation programs may indicate that a new program would have great difficulty with job placement.

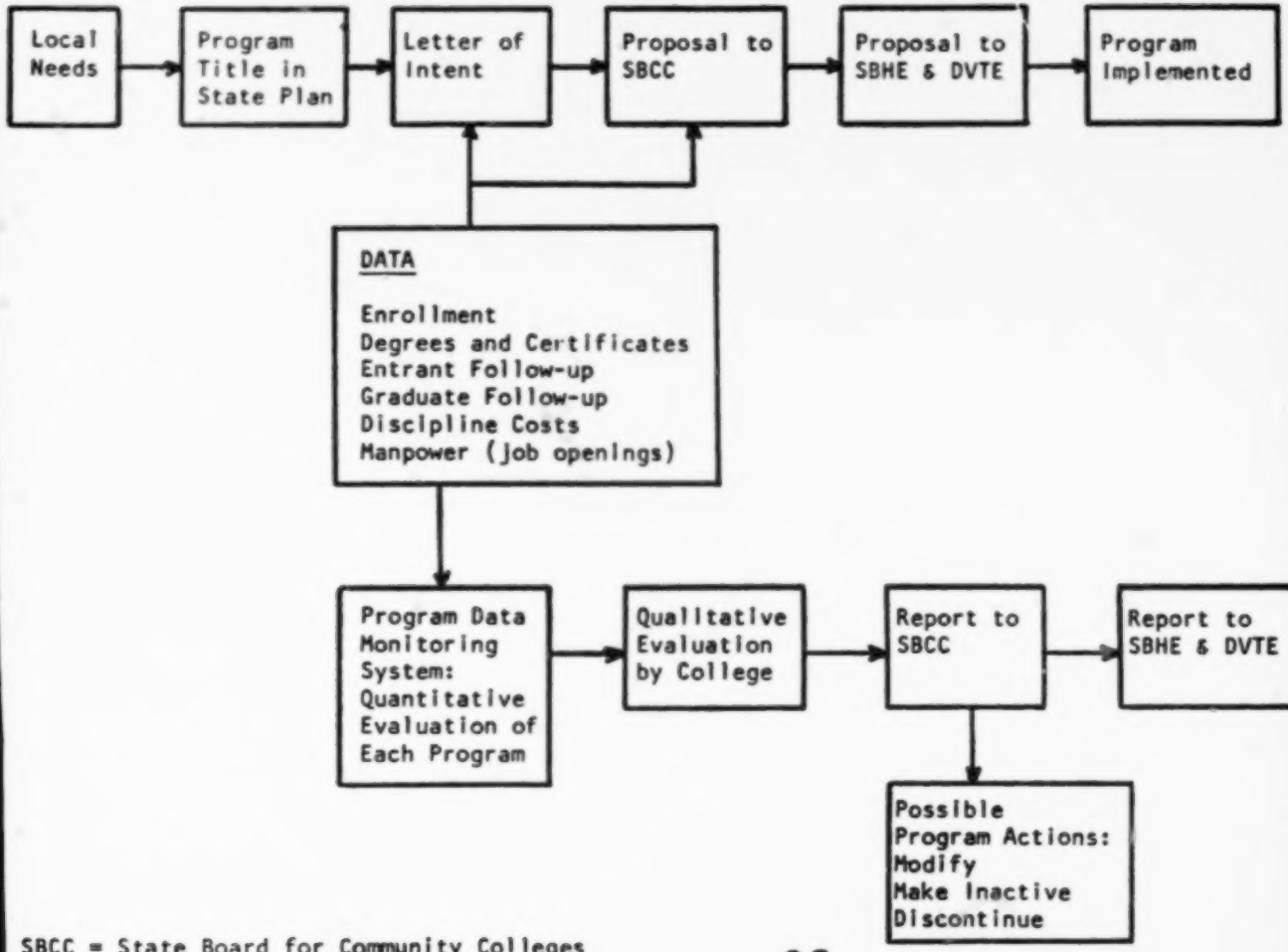
In November, the colleges submit full program proposals. The proposals are analyzed by the SBCC staff with an eye toward employment possibilities, student interest, and cost. Again, the Program Data Monitoring System is used to establish benchmarks for reasonable projections in the proposals. The SBCC acts on the program proposals at the December meeting. Following SBCC action, the programs are sent to the State Board for Higher Education (SBHE) for approval. The Division of Vocational-Technical Education (DVTE) of the Maryland State Board of Education also reviews the proposals for federal funding. Approved programs are generally implemented the following September, about fifteen months after the Letter of Intent was submitted.

Program evaluation is a two-step process in Maryland community colleges. The first step is a quantitative evaluation. Each April the SBCC staff evaluates each program at each college using the Program Data Monitoring System. The PDM System produces one computer page for each program and displays trends in enrollment, degrees, and discipline costs. Employment and transfer information from entrant and graduate follow-up is also shown. The printout is sent to the colleges for verification in May.

In June, the SBCC requests colleges to conduct a qualitative evaluation, the second step in the process. Typically, the local qualitative evaluation is done with a committee of faculty, academic administrators, and institutional research staff members. The committee draws on their experiences, conducts a deeper analysis of existing data, and seeks more information from students or employers. The qualitative evaluations are reviewed and compiled by the SBCC and distributed to the SBHE and DVTE. The most recent Program Evaluation Report was 171 pages in length and included the questions asked by the SBCC and the college responses to each question. Engineering Transfer programs were evaluated at each college statewide during the last year, and the Program Evaluation Report contains a summary of the statewide evaluation. During the first seven complete cycles of the evaluation system, 328 programs were evaluated. Many programs were improved through changes in their curriculum, staffing, recruiting, and retention. Seventy-five programs were discontinued; thirteen are currently inactive.

Maryland State Board for Community Colleges

PROGRAM IMPLEMENTATION AND EVALUATION



SBCC = State Board for Community Colleges
SBHE = State Board for Higher Education
DVTE = Division of Vocational-Technical Education
Maryland State Department of Education